

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Knee et al.

Serial No.: 09/823,616

Art Unit: 2413

Filed: March 21, 2001

Examiner: A. Bilgrami

For: First Classless Inter-Domain Routing  
(CIDR) Lookups

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313

**REPLY BRIEF**  
**IN SUPPORT OF APPELLANT'S APPEAL**  
**TO THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Sir:

Applicant (hereafter “Appellant”) hereby submits this Brief in reply to the Examiner's Answer of February 24, 2006 in the above-captioned case. Appellant respectfully reiterates its request for consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the above-captioned patent application.

An oral hearing is not desired.

## FIRST CLASS CERTIFICATE OF MAILING

I hereby certify that I am causing the above-referenced correspondence to be deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and that this paper or fee has been addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313

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Debbi Casias

Signature

05/19/2006

Date \_\_\_\_\_

## **I. INTRODUCTION**

Sections 1-8 of the Examiner's Answer do not raise any issues and Section 9 reiterates the outstanding rejection. This Reply Brief will accordingly be addressed to Section 10 only. Section 10 is divided into Issue 1 and Issue 2 and Appellant addresses them in the order presented by the Examiner.

## **II. Issue 1: Paragraph 61 was addressed in the Appeal Brief and, like Paragraph 73, does not disclose the salient limitations of Claim 1**

It would appear that Appellant misunderstood the Examiner's rejection as relying on paragraph 73 of Hunter, rather than on paragraph 61 of Hunter. Appellant apologizes for any resulting confusion. Appellant certainly was not ignoring paragraph 61 and would refer the board to the detailed discussion of paragraph 61 in Appellant's brief that begins on page 6, line 21.

Returning to Claim 1, Appellant believes that paragraph 61 is cited as showing, "retrieving an encoded mask vector from a mask table, the encoded mask vector corresponding to an address of the search key" as set forth in Claim 1.

Looking at paragraph 61 (describing Figure 6), "hash index generation is performed at step 620 based upon a mask and a [received] masked search key." In the next step, the "hash bin identified by the index is searched for an entry matching the masked search key at step 630." It would appear that entries in the hash bin have a mask length that must be "less than or equal to the search key's mask." Finally, this paragraph includes, "the masked search key must be equivalent to the address information associated with the [hash bin] entry."

Appellants are uncertain, but it would appear that the Examiner is suggesting:

- 1) that the hash bin is the same as the claimed mask table,
- 2) that the hash bin entries are the same as the encoded mask vectors, and

3) that the equivalent associated address information for the hash bin entry is the same as the claimed encoded mask vector correspondence to an address of the search key.

Even with all these equivalences, if indeed, this is what the Examiner is suggesting, the actual process specifically set forth in Claim 1 does not correspond to what happens in Hunter.

On page 7 of the Appeal Brief, Appellant made several observations about paragraph 61. These do not appear to be addressed by the Examiner's Answer. These points would include, 1) Hunter does not retrieve an encoded mask vector, 2) Hunter does not determine a set of masks, 3) Hunter does not use an encoded mask vector, 4) Hunter does not form a routing table query based upon the search key and a mask of the set of masks, 5) Hunter does not apply such a routing table query to the routing table.

While the Examiner has pointed out an error in Appellant's reference to paragraph 73, Appellant's do not find an answer to the five points made on page 7 of the Appeal Brief.

**III. Issue 2: Paragraphs 33 and 48 do not provide the teachings missing from paragraph 61.**

The Examiner here appears to be concerned that Appellant failed to appreciate the significance of paragraphs 33 and 48 in Hunter especially as they pertain to the penultimate paragraph of Claim 1. Appellant apologizes for any confusion caused by this misunderstanding. Appellant, having now reviewed these two paragraphs more closely, still fails to see any particular significance. In addition, these two paragraphs do not address any of the five points made above.

The relevant portion of Claim 1 would appear to be "forming a routing table query based upon the search key and a mask of the set of masks, indicated by the encoded mask vector to be the longest mask of the set of masks."

Paragraph 33 provides an overview of the process of Hunter and refers, in reverse order, to "generating a hash table index based upon... a current mask" and to locating a longest match by "progressively shortening a mask."

Paragraph 48 goes into more detail but there does not appear to be any more information about the actual search process than was provided in paragraph 61 et seq. Appellant still does not see a set of masks, encoded mask vectors, nor one mask being indicated by the encoded mask vector to be the longest mask of the set of masks.

#### **IV. CONCLUSION**

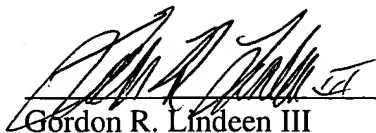
The outstanding rejection is for anticipation. Accordingly, the Examiner must show that each and every element of, e.g., Claim 1 is shown or at least suggested by the one reference, Hunter. While Hunter performs a longest match search, Claim 1 includes specific recitations about how such a search is done. The two approaches are simply different even if the results could be the same.

Accordingly, Appellant maintains that all the appealed claims in this application are patentable and requests that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

Respectfully submitted,

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